# Feeling the burn: understanding how biomass burning changes climate

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Each year, during the dry season, a large swath of the African countryside goes up in flames. During two distinct seasons—October through March in the northern hemisphere, and June through November in the southern hemisphere—fires are set to clear land, remove dead and unwanted vegetation and drive grazing animals to less-preferred growing areas. This is called “biomass burning,” and Africa is responsible for an estimated 30 to 50 percent of the total amount burned globally each year. Biomass burning also occurs when fires start naturally (such as after a lightning strike on the savannah), but they’re rare. Worldwide, 90 percent of biomass burning can be attributed to humans.

In addition to large-scale fires, biomass is a primary source of cooking fuel for 753 million sub-Saharan Africans, or 80 percent of the population. This takes place year-round and is a serious health risk to those who use it. According to the International Energy Agency, about 1.3 million people—mostly women and children—die prematurely each year because of exposure to indoor air pollution from biomass.

But the negative impacts of biomass burning are actually much bigger than that. Whenever biomass is burned, small particles, known as aerosols, escape into the air. Among these aerosols is black carbon, the strongest light-absorbing component of particulate matter. So when black carbon is released into the atmosphere, it heats up the air, which can mean bad news for the climate. At least half of the black carbon in the atmosphere is a result of biomass burning—and most of that comes from Africa.

Watch the video on YouTube.

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